



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/599,580	05/15/2007	Andrew Thoeke	042933/386066	1999
826 7590 09/28/2010				
ALSTON & BIRD LLP				
BANK OF AMERICA PLAZA				
101 SOUTH TRYON STREET, SUITE 4000				
CHARLOTTE, NC 28280-4000				
EXAMINER				
WU, QING YUAN				
ART UNIT		PAPER NUMBER		
2194				
MAIL DATE		DELIVERY MODE		
09/28/2010		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/599,580

Applicant(s)

THOELKE, ANDREW

Examiner

Qing-Yuan Wu

Art Unit

2194

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 June 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 October 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-8508)
- Paper No(s)/Mail Date 10/20/06, 6/17/10
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Inventor's Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This office action is responding to the preliminary amendment filed on 10/2/06. Claims 1-41 are pending in the application.
2. As recited throughout various claims, various recitations of “wherein” and “for use” clauses rendered the limitations optional. See MPEP 2106(II)(C) and MPEP 2111.04. However, in the interest of compact prosecution, these limitations will nonetheless be addressed in this office action.

Specification

3. Applicant is suggested to place corresponding sections of the specification under the proper headings (i.e. inserting Brief summary of the invention on pg. 6, line 1) further amending the amendment to the specification submitted on 10/2/06.
4. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant’s use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase “Not Applicable” should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.

- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

5. The abstract of the disclosure is objected to because the abstract should be on a separate sheet of paper excluding other contents that are not part of the abstract. In addition, on line 1 of the abstract, the limitation "punish" should read --publish--. Correction is required. See MPEP § 608.01(b) and 37 CFR 1.72(b).

Claim Objections

6. Claims 20, 24-26, 31-32 and 34-39 are objected to because of the following informalities:
- a. As to claim 20 - "A method according to claim 16" should read -- A method according to claim 19-- since claim 20 further limits the writing of the retrieved property which was neither disclosed in claim 16 nor claim 1 in which claim 20 depends on.
 - b. As to claim 24 - "the process which created it" should read --a process which created it--.

c. As to claim 25 - "by SID" should read --by a security identifier (SID)--. Claim 26 is objected to for the same reason.

d. As to claims 31-32 and 34-39 - all recitation of "a message", "the said message", "a/the message queue" and/or "the said message queue" should read --the message-- and --the message queue facility-- as recited in claim 30 to properly reference the limitation or distinctively recited as "a specific message" to clearly distinguish the limitation.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1-41 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 1-41 contains such long recitation of unimportant details such as fields of a property/message, the bit and byte sizes of particular data structures and that the scope of the claimed invention is rendered indefinite thereby. See MPEP 2173.05(m).

Claim Rejections - 35 USC § 101

9. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

10. Claim 41 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

11. Claim 41 is rejected under 35 U.S.C. 101 because it is an operating system claim directed to software alone without claiming associated computer hardware required for execution, and software alone fails to fall within a statutory category of invention. As claimed, a computing device is for used with the operating system and not a part of the operating system, therefore the claim is directed to software only.

Allowable Subject Matter

12. Claim 14 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims in addition to overcoming the 112 2nd paragraph rejection above.

Claim Rejections - 35 USC § 102

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

14. Claims 1-5, 18, 21-31, 35 and 40-41 are rejected under 35 U.S.C. 102(e) as being anticipated by McGuire et al. (hereafter McGuire) (US Patent 7,107,497).

15. As to claim 1, McGuire teaches the invention as claimed including a method of operating a computing device comprising arranging for a kernel portion of an operating system for the computing device to retrieve a property published within a first process and to notify the retrieved property to one or more further processes requesting to subscribe to the property [system event framework system operating within kernel memory retrieving an event from the kernel (a system process, a control program/software) and notify the event to subscribing user level applications, col. 6, lines 1-31; Figs. 2-3].

16. As to claim 2, McGuire teaches the invention as claimed including wherein the operating system is arranged to supply a retrieved property in the form of a first part comprising a property name space and a second part comprising a property type [event with name/identifier and type, col. 6, lines 32-46; col. 8, lines 40-55].

17. As to claims 3-5, McGuire teaches the invention as claimed including wherein the name space comprises a category part and a key part, wherein the category part comprises a unique identifier (UID) and wherein the key part comprises a UID [event and/or event buffer having an event identifier that comprise a timestamp and sequence number, col. 8, lines 40-55].

18. As to claim 18, McGuire teaches the invention as claimed including wherein the kernel portion is arranged to define the order in which the property is notified to the one or more further processes [notification or delivery of event are extracted by unspecified order, col. 8, lines 25-32].

19. As to claims 21-23, McGuire teaches the invention as claimed including wherein the kernel portion is arranged to use a kernel thread of known priority to notify the retrieved property to the one or more further processes, wherein the kernel thread of known priority comprises a supervisor type thread of the operating system kernel, comprising using a deferred function call queued on the supervisor type thread to notify the retrieved property to the one or more further processes [event delivery thread implemented in the kernel memory as a part of the system event framework system deliver events in a deferred manner by extracting event (buffer) from its queue to event to clients, col. 8, lines 25-32; Figs. 2-4].

20. As to claims 24-25, McGuire teaches the invention as claimed including wherein the property is arranged such that it can only be removed from the operating system by the process which created it [kernel as event publisher flushing/removing event after completion of delivery, such that the kernel (process or thread) are individually identifiable, abstract; col. 4, line 66-col. 5, lines 17; col. 8, lines 1-3; col. 9, lines 22-24; Fig. 8, 870]

21. As to claim 26, McGuire teaches the invention as claimed including wherein retrieving and/or subscribing to the property is controlled by SID [event subscribing by identifiable subscribers, col. 7, lines 7-14; col. 11, lines 10-20].

22. As to claim 27, McGuire teaches the invention as claimed including wherein the property is provided with a persistence attribute [Event attributes and/or related states are persistent such that it remains in an event queue until removed/flushed by the kernel, col. 8, line 50-col. 9, line 28].

23. As to claim 28, McGuire teaches the invention as claimed including wherein the kernel portion is arranged to direct the retrieved property into persistent storage [storing retrieved event in system event loadable module, col. 7, lines 7-54].

24. As to claim 29, McGuire teaches the invention as claimed including wherein the kernel portion is arranged to commit any outstanding change to the property to storage as part of operating system shutdown [buffered events or event buffers are not removed until event receipt acknowledgement such that system event loadable module in which the event buffers reside are part of the kernel memory which is not limited to RAM therefore is persistent, col. 7, lines 7-54; col. 6, lines 1-4].

25. As to claim 30, McGuire teaches the invention as claimed including wherein the property comprises a message and message queue facility for the computing device [event and queuing of event, col. 7, lines 7-54].

26. As to claim 31, McGuire teaches the invention as claimed including wherein the message queue is provided with a handle for enabling a message queue object to be opened by a reader and/or a writer of a message in the message queue [system event loadable module having event handle for linking event (message) between kernel and subscriber for delivery of event for consumption, col. 10, lines 17-64; Fig. 7].

27. As to claim 35, McGuire teaches the invention as claimed including wherein messages placed in a message queue are provided with a priority level for sequencing messages in the message queue [notification or delivery of event are extracted from queues by unspecified order/priority, col. 8, lines 25-32].

28. As to claim 40, McGuire teaches the method of operating a computing device as recited in claim 1, therefore McGuire teaches the computing device for implementing the method.

29. As to claim 41, McGuire teaches the method of operating a computing device as recited in claim 1, therefore McGuire teaches the operating system for a computing device for implementing the method.

Claim Rejections - 35 USC § 103

30. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

31. Claims 6-11, 16-17, 19-20, 32-34 and 36-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over by McGuire as applied to claims 1-3, 30 and 35 above.

32. As to claim 6, McGuire does not specifically teach wherein the name space comprises a 64-bit integer made of two 32-bit parts. However, it is well known in the art of computer related system or programming to predefine variables of specific sizes and/or of a particular data types/structures, and storing the variables in predefined memory sizes such that expanding the predefined memory sizes to accommodate an oversized variables. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the event notification mechanism having event defined by specific parameters/attributes of McGuire to include the well known method of predefining parameters/attributes in specific sizes and data types/structures and storing the variables in predefined memory sizes such that expanding the predefined memory sizes to accommodate an oversized variables to achieved the predictable result of notifying the event from a publisher to a subscriber.

33. As to claims 7-11, 19-20 and 32-34, these claims are rejected for the same reason as

claim 6 above.

34. As to claim 16, McGuire does not specifically teach wherein the kernel is arranged to notify to the one or more further processes only that the property has changed without specifying a new value for the retrieved property so as to enable multiple changes in the value of the property to be notified as a single notification. However, granularity and specificity of a notification is a matter of design choice. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the event notifications of McGuire to notify different granularities of events such that insignificant notifications are eliminated.

35. As to claim 17, McGuire does not specifically teach wherein the kernel portion applies a limit on the number of further processes subscribing to the property. However, McGuire disclosed number of event channels created based on resource availability [col. 12, lines 23-28]. However, it is well known in the art of computer related technology that all computer system have a limited availability of resources and to have placed a limit on the number of resource requesters. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the event notification mechanism having event subscribers of McGuire to include the well known method of placing a limit on resource consumer as considered by McGuire to limit the number of subscribers subscribing to a property.

36. As to claim 36, McGuire does not specifically teach wherein seven priority levels are provided for messages sequenced in the message queue. However, McGuire disclosed storing

events in queues as they occur and logging the timestamp and sequence value [col. 7, lines 7-54; col. 8, line 50-col. 10, line 4] in unspecified order. In addition, it is well known in the art of computer task management to provide priority sorting or handling of tasks according to various mechanisms such that the mechanisms dictate the priorities of the tasks to be handle. Furthermore, a specified number of priority levels is a matter of design choice. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the events queuing of McGuire to include the well known method of prioritizing of the queue events with a specified number of priority levels that is applicable to the system.

37. As to claim 37, this claim is rejected for the same reason as claim 36 above.

38. Claims 12-13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over by McGuire as applied to claims 1-2 above, in view of Hondo et al. (hereafter Hondo) (US Patent 7,304,982).

39. As to claim 12, McGuire does not specifically teach wherein the property type is provided with an access control policy defined when the property is created. However, Hondo teaches defining an event policy which provides access control of an event class/type [abstract; col. 6, lines 10-43]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the publishing and subscribing of event of specific type/class as being taught by McGuire with Hondo's teaching of applying event policy to event type/class because McGuire and Hondo are in the same field of endeavor of event notification

and a person of ordinary skill in the art would be motivated to combined McGuire with Hondo because the teaching of Hondo can further improve the security and control of communicating confidentiality information between communicating entities as being considered by Hondo [col. 1, line 64-col. 2, line 7].

40. As to claim 13, McGuire as modified teaches the invention substantially as claimed including wherein the access control policy cannot be changed after the property has been created [Hondo, event policy can only be changed at time of configuring the event policy, such that the policy applied to a specific property/event cannot be changed once the property/event is en route, col. 7, line 14-col. 8, line 59].

41. As to claim 15, McGuire as modified teaches the invention substantially as claimed including wherein access control policy arranges the property in a reserved category which only allows a property to be defined in that category by a process having a write-system-data capability [Hondo, event policy placed the event class/type in the personally identifiable information category that only an administrative user via a administrative management utility can define, col. 6, lines 10-43; col. 7, lines 10-61].

42. Claims 38-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over by McGuire as applied to claims 1 and 30 above, in view of Cohen (US Patent 5,881,315).

43. As to claims 38-39, McGuire does not specifically teach a wait for space facility is provided for enabling, when a message queue is full when a call is made by a party to place a message on that message queue, the said message to be placed on the said message queue as soon as space becomes available on the queue without the need for a further call from that party; and when no messages are present on a message queue when a request to retrieve a message on the said message queue is received from a party, a message appearing on the said message queue to be notified to that party without the need for a further call from that party. However, Cohen teaches a feature that eliminates the need for a further call from a party that wants to place or retrieve message from a message queue by allowing the party to wait on the queue [col. 8, line 21-col. 9, line 29]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the event notification system as being taught by McGuire with Cohen's teaching of queuing events/messages because McGuire and Cohen are in the same field of endeavor of event notification and a person of ordinary skill in the art would be motivated to combined McGuire with Cohen because repeated polling or resending of requests due to a failed attempt leads to inefficient management of computer resources.

44. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent 7,028,229 to McGuire teaches publishing and subscribing to event between kernel process and user level application.

45. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Qing-Yuan Wu whose telephone number is (571)272-3776. The examiner can normally be reached on 8:30am-6:00pm Monday-Thursday and alternate Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/QING-YUAN WU/
Primary Examiner, Art Unit 2194